

Remarks/Arguments

Specification has not been amended. Claims have not been amended. No new claims have been added. No claims have been cancelled. Claims 1-19 remain pending in this application. Reexamination and reconsideration of the application are respectfully requested.

Claim Rejections under 35 U.S.C. § 102

The Examiner rejected Claims 1-19 under 35 U.S.C. § 102(b) as being anticipated by Marshal et al., US 6,101,493 (hereinafter "Marshal"). Applicants respectfully traverse this rejection for the reasons set forth below. Applicants respectfully point out that Examiner's reference to the application title in his/her opening remarks of Detailed Action appears to have an omission of the term "System". The application title as originally filed should be "Data Display System, Data Display Method, Computer **System** and Computer Program Product".

Anticipation requires that the "four corners" of the reference include each and every limitation of a given claim. The Examiner contends, incorrectly, that Marshal expressly discloses every limitation in each of Claims 1-19. They do not.

Marshal teaches a method and system for displaying related information from a database. To this end, Marshal provides a system and method through which information from related tables of a database is displayed in different display windows (i.e. different display areas) on a display screen. The different display windows are interlinked such that a selection of one or more entries in one of the display windows causes the other of the display windows to distinguishably display those entries that are related to the selection (see Marshal col. 2, lines 49-55). As an example, Marshal discloses a

database containing related tables such as "Customers", "Products" and "Invoices". Three different list boxes (i.e. display areas) are provided and each is associated with a different one of the above-related tables. Each of the list boxes initially displays actual data items (i.e. rows or records of data) from the associated table. When a record (e.g. "Blanding, Bill") from the list box associated with the Customer table is selected, it is highlighted. Then, the list boxes associated with Products and Invoices tables are automatically modified such that they visually (e.g. thru a check-marking or highlighting) indicate those records that are related to the record selection in the list box associated with the Customer table. The related records (i.e. first set of retrieved records) are sorted and placed at the top of the list box before the records that are not related (i.e. second set of retrieved records) (see Marshal col. 9, lines 34-65). This is different from Applicants' claimed invention, which provides a method and system for displaying a very large amount of data in a limited display area (e.g. a list box) so that the contents of all data can be recognized and data transmission load can be reduced (see Application page 4, lines 12-14). According to the Applicants' invention, some blocks of data are displayed in full while all other blocks of data are abridged or abbreviated. For example, the first row and the last row and some intermediate rows of the target data are displayed in full while for all other rows of the target data that are not actually displayed, a predetermined abridged form (e.g. "***◇***" or any other symbols used as placeholders) is displayed instead. As a result, an overall representation of the target data (i.e. an all-inclusive view of target data) is presented in a limited display area (see Application page 4, line 22 thru page 5, lines 2, and Fig. 4). Furthermore, when a predetermined abridged form representing the abridged data block (i.e. data that is not currently displayed) is selected within the limited display area, some more rows or blocks of data are fully displayed and some other rows or blocks of data are again displayed in an abridged form. In addition, the contents of the abridged data are not read (i.e. retrieved) from the database, only the

fully displayed blocks of data are read from the database. Thus, the communication load for data access is reduced (see Application page 5, lines 4-20). These distinctions, which are clearly recited in each and every one of the claims, are apparent in that Applicants' claimed invention provides for retrieving and displaying a subset of a very large amount of data in a limited display area and displaying an abridged form representing the data which are not actually retrieved or displayed. The limited display area in Applicants' invention is not interlinked with any other display area. Selection of a data item from the display area of the Applicants' invention does not automatically cause modification of other display areas. Accordingly, the claimed elements are different from displaying related information from related database tables in multiple associated and interlinked display areas as disclosed in Marshal. For this reason, Marshal cannot anticipate the subject matter of Applicants' claimed invention and the § 102(b) rejection of Claims 1-19 couldn't stand.

Claim 1

Marshal col. 2, lines 62-67 recites:

"As a computer system, an embodiment of the invention includes a database containing tables of data, a display device and a processor unit. The display device has a plurality of display areas, and each of the display areas displays data from an associated table within the database. The processor unit operates to access the database to retrieve..."

The Examiner states that Marshal col. 2, lines 62-67, as recited above, teaches a computer system comprising: a display device having a display area on a display screen thereof, wherein out of target data to be displayed in said display area, one or multiple first data sets, the contents of

which are actually displayed, and one or multiple first predetermined displays, which represent one or multiple first data groups of the target data other than the first data sets, are presented in the display area. Applicants disagree and believe that the Examiner has misconstrued the above reference, as Marshal does not teach the concept of displaying predetermined displays (i.e. symbols representative of data) for those blocks of data from the target data that are not actually displayed in the display area.

According to Applicants' invention, the term "target data" refers to the data, which is to be displayed and be subject to user manipulation. The term "data sets" refers to one or more data blocks, which are actually displayed. The term "data groups" refers to one or more data blocks other than the data sets, which are not displayed but are represented in predetermined abridged forms using one or more predetermined displays. Each data block consists of one or more rows of target data. The term "predetermined displays" is used to identify one or more predetermined abridged forms of data (i.e. the data groups). A predetermined display includes an image display, a text display, a color display, a pattern (e.g. "****<****" as shown in Fig. 4) or shaded display, or any other type of display that will help a user to identify an abridged data in the display area. The term "reading pointer" refers to a pointer that points to the current row of the target data. For example, the reading pointer could be an SQL cursor (see Application page 5, lines 22-31 and page 6, lines 1-2). In accordance with present invention, target data is a very large amount of data that needs to be displayed in a limited display area such as a list box. For example, target data could consist of contents of a single document or contents of a single table or it could consist of merged contents of several documents or tables. Data sets and data groups simply are subsets of the target data; they are not the actual files or tables containing the data. In a given display area, data sets are actually

displayed in full but data groups are displayed in an abridged form. Data groups are not actually retrieved or displayed. This is different from Marshal's teachings per above reference where multiple interlinked display areas are provided each of which displays data retrieved from an associated table.

Claim 2

Marshal col. 8, lines 20-26 recites:

"If an update message has been received, a first set of records to be displayed in the associated list box are retrieved 512. The first set of records are retrieved 512 from an appropriate table in the database 214, 300 that is associated with the key that accompanies the update message. Then, the first set of the retrieved records are selected, sorted, and then displayed 514 in the associated list box as the first part of the displayed records."

The Examiner states that Marshal col. 8, lines 20-26, as recited above, teaches the fact that said first data sets and said first data groups are sorted in the ascending order or in the descending order, and said first data sets and said first predetermined displays are presented in sorting orders thereof. Again Applicants disagree and believe that the Examiner has misconstrued the above reference. Although both Marshal and Applicants' invention are performing sorting of the retrieved data records, they provide totally different methods for displaying the sorted records. According to Marshal's above reference, a first set of records are retrieved, sorted and displayed in a selected form in the associated list box as the first part of the displayed records and a second set of records are retrieved, sorted and displayed in an unselected form in the associated list box as the second part of

the displayed records (see also Marshal col. 8, lines 26-33). The first part of the displayed records and the second part of the displayed records together do not present the entire data records in sorting order. For example and as shown in Marshal's FIG. 12, "Bird, Dennis" in the first part of the displayed records appears before "Adams, Charles" in the second part of the displayed records. In addition, Marshal's above reference does not teach displaying predetermined displays in lieu of displaying data groups (i.e. data that is not actually retrieved or displayed) as in Applicants' Claim 2. As a whole, data records in Marshal's list boxes do not appear in sorting order. However, according to the Applicants' invention, entire data records are sorted and then some of the data records are displayed in the list box (i.e. first data sets) and some others of the data records are not displayed in the list box (i.e. first data groups). Those blocks of data records that are not displayed in the list box are represented by predetermined displays (i.e. special symbols). As a whole, data records in Applicants' invention list box appear in sorting order (see Application Fig. 4).

Claim 3

Marshal col. 5, lines 17-31 recites:

"The first display area 108 includes a first information area 114 and a list box 116. The first information area 114 includes a label plate 118, a full-size button 120, and a group drop down list box 122. The list box 116 is a multicolumn list box. The list box 116 lists or otherwise displays multiple entries with a row and column format. The list box 116 includes column headings 124 and 126 (as well as other column headings that are not illustrated in FIG. 1 partly because the size of the list box 116 is less than its maximum size), which provide labels for the columns of the list box 116. The first display area 108 also includes a count plate 128 placed at the lower portion of the

list box 116. The count plate 128 displays or otherwise indicates a number of selected entries within the list box 116 as well as a number of total entries within the list box 116."

The Examiner states that Marshal col. 5, lines 17-31, as recited above, teaches the fact that first data sets include the first and the last data of said target data. Once again Applicants disagree and believe that the Examiner has misconstrued the above reference. The above Marshal reference does not disclose the fact that displaying first data sets include displaying the first data (i.e. first row of target data) and the last data (i.e. last row of target data) in the limited display area of the list box regardless of the list box size. In Marshal, the only way the first row and the last row of the target data could be displayed in a list box at the same time is when the total number of rows is small enough to fit all rows of target data in the list box. This would be a sheer coincident rather than a systematic approach for displaying all data in a limited display area. Unlike Marshal, the Applicants' invention provides a process by which displaying of the first data and the last data of the target data in a limited display area is guaranteed. According to the Applicants' invention, and based on the size of the display area, a check is performed to determine whether all the data to be displayed can be displayed in the display area. When the total number of rows in the target data exceeds the number of data rows that can be displayed in the display area (i.e. "numFetches"), an abridgement process is initiated. Through this process, data acquisition and data display is based on some calculated control variables. The control variables include: number of abridged data entries (i.e. "numDividers"), number of data rows to be displayed for each data block (i.e. "numShown"), and number of data rows for each data block that are not to be displayed (i.e. "numHidden"). As a result,

a bird's eye view of the target data, which includes the first data and the last data and some data in between, is obtained (see Application page 12, line 22 thru page 15, line 15 and Figs 3 and 4).

Claim 4

Marshal col. 5, lines 7-16 recites:

"The main screen 100 includes the menu 102, a tool bar 104, and an information display region 106. The information display region 106 includes a first display area 108, a second display area 110 and a third display area 112. As explained in detail below, the first, second and third display areas 108, 110, 112 are interlinked such that selections in any of the display areas invoke automatic modifications to the other of the display area. By interlinking display areas in this manner, related information being displayed in the display area can be readily identified."

The Examiner states that Marshal col. 5, lines 7-16, as recited above, teaches the fact that by the operation of selecting said first predetermined displays, one or multiple second data sets, the contents of which are actually displayed, and one or multiple second predetermined displays, which represents one or multiple second data groups of the target data other than said first and second data sets, are presented together with said first data sets in said display area. Once again Applicants disagree and believe that the Examiner has misconstrued the above reference. First of all, the above Marshal reference discloses first, second and third display areas, which are interlinked, and selection of a data item in one display area affects the contents of the other two display areas. Unlike Marshal, Applicants' invention does not disclose any interlinked display areas and all data are displayed in the same display area (i.e. said display area) and selection of a data item (i.e. not a

predetermined display) in this display area does not affect any other display areas. Second, Marshal does not disclose the concept of displaying predetermined displays (e.g. "****◇****" as shown in Fig. 4) representative of data records (i.e. data groups) that are not actually retrieved or displayed. According to the Applicants' invention and as recited in Claim 4, when a predetermined display is selected, more data records are displayed in the same display area as currently displayed data records. Selection of a predetermined display (i.e. the abridged data entry such as "****◇****") initiates a process through which the selected predetermined display (i.e. abridged image) is deleted and replaced by some of the data records previously not displayed and by additional predetermined displays (i.e. second predetermined displays) (see Application page 15, line 23 thru page 16, line 19, and Figs 5 and 6).

Claim 5

Marshal col. 3, lines 11-31 recites:

"As a graphical user interface for a display screen of a computer, an embodiment of the invention includes a first display area having a first label and a first data window, the first data window displays a first type of data in multiple rows and columns, and the first label identifies the first type of data; and a second display area having a second label and a second data windows the second data window displays a second type of data in multiple rows and columns, and the second label identifies the second type of data. Either a first selection of at least one of the rows in the first data window or a second selection of at least one of the rows in the second data window can be made. When the first selection of at least one of the rows in the first data window occurs, the rows in the second data window that are associated with the first selection

are automatically visually distinguished from other of the rows. When the second selection of at least one of the rows in the second data window occurs, the rows in the first data window that are associated with the second selection are automatically visually distinguished from other of the rows."

The Examiner states that Marshal col. 3, lines 11-31, as recited above, teaches the fact that said first predetermined displays and said second predetermined displays are correlated with the first data rows and the number of data rows of said first data groups and said second data groups, respectively. Applicants disagree and believe that the Examiner has misconstrued the above reference as well. Once again, the above Marshal reference discloses first and second display windows (i.e. display areas) that are interlinked and selection of a data item in one display window affects contents of the other display windows. As explained before, Marshal does not teach the concept of displaying predetermined displays (i.e. abridged images such as "****◇****") to represent data that is not displayed in the display area. As such, Marshal's above reference cannot teach or disclose the correlation between the predetermined displays and the data that they represent. According to the Applicants' invention, when a predetermined display (i.e. an abridged image) is added to the list of displayed data, it is correlated (i.e. associated) with the starting row number and the total number of rows of data that are not to be displayed but are to be represented by such predetermined display. An SQL cursor is updated to point to the data row immediately after the data not to be displayed (see Application page 14, lines 8-15). This facilitates the retrieval of associated data when a predetermined display is selected. In Marshal, there is no notion of predetermined displays. Furthermore, there is no association in terms of the starting row number and the total

number of rows of data, between a data item in one display window and data items in another display window.

Claim 6

Marshal col. 7, lines 1-21 recites:

"The user selections 208, 210 and 212 are selections of one or more entries in the list boxes 116, 132 and 148, respectively. As an example, the user selections can be achieved with a pointing device. More particularly, with respect to the list box-1 process 202, a user selection 208 will result from a user selecting one or more of the entries within the list box 116. The user can also select a group of the entries within the list box 116 by using the group drop down list box 122. As an example, the group drop down list box 122 could contain group designators such as "All" (the illustrated group in FIG. 1), "Frequent Buyers," or "Retailers." The group designators will vary with the list boxes as well as with the type of application. After one or more of the entries within the list box 116 have been selected by the user selection 208, the list box-1 process 202 will obtain a key from the database 214. Using the key, the list box processes 204 and 206 together with the database 214 operate to retrieve, order and display the appropriate entries in the list boxes 132 and 148. Those of the entries that are associated with the user selection 208 are distinguishably displayed from the other entries in the list boxes 132 and 148. The processing performed by the invention is described in greater detail below."

The Examiner states that Marshal col. 7, lines 1-21, as recited above, teaches the fact that selection of said first data sets or said second data sets is a data entry operation. Applicants disagree and believe that the Examiner has misconstrued the above reference as well. As the above Marshal reference discloses, after the user has selected one or more of the list box entries, a key is obtained from the database. This key is then used to retrieve, order and display appropriate entries in other interlinked list boxes. Selection of a data item from displayed first or second data sets in Applicant's invention does not cause a key to be obtained from a database for further processing. Furthermore, Marshal does not disclose the idea of using the selected data item in a data entry operation. According to the Applicants' invention, when the data displayed in full is selected, an input operation for the data can be initiated. For example, the selected data may be entered into a word processing document or entered into an SQL statement. Thus, even if the target data is complicated, it can be searched for while referring to the contents of the data, and input errors can be prevented. Applicants' present invention may be used not only for displaying data, but also for inputting data in an application by selecting the actually displayed data and avoiding manual data entry errors (see Application page 17, lines 8-14).

Claim 7

Marshal col. 3, lines 46-59 recites:

"As a method for displaying data on a display device of a computer system, the data being obtained from tables in a database associated with the computer system, the display device having a plurality of display areas, an embodiment of the invention includes the operations of: displaying entries from the database in the display areas; determining whether a selection of one or more entries being displayed in a

particular one of the display areas has occurred; obtaining a key from the database in accordance with the selection; notifying the other of the display areas of the key; and updating the entries in the other of the display areas so as to visually distinguish those of the entries that are associated with the key with those entries that are not associated with the key. ”

The Examiner states that Marshal col. 3, lines 46-59, as recited above, teaches the fact that said target data is recorded in a different computer system connected to said computer system via communication means, and the contents of said first and second data groups are not transmitted from said different computer system to said computer system. The Examiner further states that above reference makes it inherent that the data may be retrieved from a different computer. Once again, Applicants disagree and believe that the Examiner has misconstrued the above reference. Although the above Marshal reference implies that the data to be displayed may be retrieved from a different computer system than the computer system that displays the data, it does not disclose a method by which certain data is not actually retrieved nor transmitted from the different computer system. According to Applicants' invention, only the fully displayed blocks of data are read from the database, transmitted over the network and displayed, not the abridged data (i.e. contents of the first and the second data groups). Thus, the communication load for data access is reduced (see Application page 5, lines 16-20 and page 15, lines 12-15).

Claim 8

Marshal col. 8, lines 15-24 recites:

"The select and update processing 500 can be viewed as having a select processing portion which is that processing prior to block 510 and an update processing portion which begins at block 510. If an update message has been received, a first set of records to be displayed in the associated list box are retrieved 512. The first set of records are retrieved 512 from an appropriate table in the database 214, 300 that is associated with the key that accompanies the update message."

The Examiner states that Marshal col. 8, lines 15-24, as recited above, discloses a data display method ... comprising the step of: identifying first data sets, which are included in said target data to be displayed in said display area and the contents of which are actually displayed in said display area. Applicants agree with the Examiner that this step of Claim 8 may be implied by the above reference, which discloses a first set of records being retrieved from a database. However, Applicants respectfully point out that Marshal does not expressly disclose every limitations of Claim 8 as explained below.

Marshal col. 8, lines 1-30 recites:

"The select and update processing 500 begins with a decision block 502 that determines whether a user selection has been received. The user selection involves the user selecting one or more entries in one of the list boxes 116, 132 and 148. If a user selection has been received, then a key associated with the user selection is obtained 504. The key represents the user selection in the database 214, 300. Then, an update message having the key is prepared 506. Next, the update message is sent 508 to the other of the list boxes. On the other hand, if the decision block 502

determines that no user selection has been made, then blocks 504-508 are bypassed. Thereafter, following block 508 or following block 502 when no user selection has been made, a decision block 510 determines whether an update message has been received. The select and update processing 500 can be viewed as having a select processing portion which is that processing prior to block 510 and an update processing portion which begins at block 510. If an update message has been received, a first set of records to be displayed in the associated list box are retrieved 512. The first set of records are retrieved 512 from an appropriate table in the database 214, 300 that is associated with the key that accompanies the update message. Then, the first set of the retrieved records are selected, sorted, and then displayed 514 in the associated list box as the first part of the displayed records. A second set of records to be displayed in the associated list box are also retrieved 516. These records are retrieved 516 from an appropriate table in the database 214, 300 but are not associated with the key that accompanies the update message."

The Examiner states that Marshal col. 8, lines 1-30, as recited above, discloses a data display method ... comprising the step of: identifying first data groups, which are included in said target data other than said first data sets and the contents of which are not displayed in said display area. Applicants disagree and believe that the Examiner has misconstrued the above reference. First of all Marshal's above reference discloses a key, which is not present in Applicants' invention. According to Marshal, after it is determined that a user selection has been made, a key is obtained from the database to represent the user selection of one or more entries in the list box. Unlike Marshal, no such key is obtained from the database to represent user selection of one or more entries in the

display area of Applicants' invention. Second, the Examiner mistakenly correlates Marshal's second set of records with Applicants' first data groups. As stated in the above Marshal reference (see Marshal col. 8, lines 26-30), both the first set of records and the second set of records are retrieved and displayed in a list box. This is different from the Applicants' first data groups, which unlike the first data sets, are not retrieved nor displayed in the display area. Marshal teaches away from the concept of selectively not displaying a subset of target data. Marshal does not disclose the concept of displaying predetermined displays (e.g. symbols "****◇****") in place of data groups that are not retrieved nor displayed. For further clarification, please refer back to the definition of "data sets", "data groups", "target data", and "predetermined displays" as stated earlier in this response and in the Application.

Marshal col. 8, lines 28-39 recites:

"These records are retrieved 516 from an appropriate table in the database 214, 300 but are not associated with the key that accompanies the update message. Next, the second set of retrieved records are unselected, sorted and then displayed 518 in the associated list box as a second part of the displayed records. Thereafter, a select count and a total records count for the associated list box are updated and displayed 520 proximate to the associated list box. Following block 520 in the case in which an update message is received, as well as following block 510 in the case in which no update message is received, the select and update processing 500 is complete and ends."

The Examiner states that Marshal col. 8, lines 28-39, as recited above, discloses a data display method ... comprising the step of: reading said first data sets from a recording area wherein said target data is stored and displaying said first data sets in said display area. The Examiner further states "Marshal discloses displaying the list box for the total records counted and updated the list box with a total number of records retrieved". Applicants agree with the Examiner that Marshal discloses a method for retrieving data records from a database and displaying them in a display area such as a list box. However, Applicants do not understand the relevance of the Examiner's note regarding Marshal's display of total records counted and total number of records retrieved to this step of Claim 8 in Applicants' invention, which is simply about reading and displaying the records. Unlike Marshal, Applicants' invention does not display the total records counted and the total number of records retrieved.

Marshal Figure 1, Element 116;

Marshal col. 5, lines 17-32 recites:

"The first display area 108 includes a first information area 114 and a list box 116. The first information area 114 includes a label plate 118, a full-size button 120, and a group drop down list box 122. The list box 116 is a multicolumn list box. The list box 116 lists or otherwise displays multiple entries with a row and column format. The list box 116 includes column headings 124 and 126 (as well as other column headings that are not illustrated in FIG. 1 partly because the size of the list box 116 is less than its maximum size) which provide labels for the columns of the list box 116. The first display area 108 also includes a count plate 128 placed at the lower portion of the list box 116. The count plate 128 displays or otherwise indicates a number of selected entries within the list box 116 as well as a number of total entries within the list box 116.

The Examiner states that Marshal Figure 1, Element 116 discloses a first predetermined displays representing said first data groups in said display area. Applicants disagree and believe that the Examiner has misconstrued the above reference. The Examiner has misunderstood the difference between the Element 116 (i.e. a list box) in Marshal and "predetermined displays" in Applicants' invention. According to Marshal col. 5, lines 17-32 recited above for reference by Applicants, Element 116 is a multicolumn list box (i.e. display area), which displays multiple entries with a row and column format. This list box (i.e. Element 116) does not represent any particular data records (e.g. data records that are not supposed to be displayed). Element 116 is simply an area within a display area where data records are displayed. In contrast and according to the Applicants' invention, the term "predetermined displays" is used to identify one or more predetermined abridged forms of data (i.e. data not displayed such as the data groups). A predetermined display includes an image display, a text display, a color display, a pattern (e.g. "****◇****" as shown in Fig. 4) or shaded display, or any other type of display that will help a user to identify an abridged data (i.e. data not displayed) in the display area (see application page 5, lines 27-31). Predetermined displays are displayed (i.e. presented) in the display area in place of the data that are not to be displayed (i.e. data groups).

Claim 9

Marshal col. 9, lines 14-15 recites:

"Next, a second set of records are retrieved 516 from the table in the database 214, 300 that is associated with the key."

The Examiner states that Marshal col. 9, lines 14-15, as recited above, discloses selecting said predetermined displays; identifying second data sets, which are included in said first data groups and the contents of which are actually displayed in said display area. Once again Applicants disagree and believe that the Examiner has misconstrued the above reference. As explained before, Marshal does not disclose anything similar to Applicants' "predetermined displays" (see definition of predetermined displays recited earlier). Furthermore and in particular, the above reference does not disclose any selecting step to cause more data records to be retrieved and displayed from the database. Marshal's second set of records is retrieved and displayed right after the first set of records is retrieved and displayed. Unlike Marshal, the second data sets in Applicants' invention are only retrieved and displayed if a predetermined display (i.e. an abridged data entry) representing the data records that are not displayed (i.e. first data groups) is selected.

Marshal col. 9, lines 14-33 recites:

"Next, a second set of records are retrieved 516 from the table in the database 214, 300 that is associated with the key. The retrieved records are then unselected, sorted and displayed 518 in the associated list box. The unselection of these retrieved records is performed in this embodiment so that they will not be distinguishably displayed as selected records (even if previously displayed as selected), but other embodiments may not need to perform such unselection. The sorting of the retrieved records of the second set operates similar to the sorting of the first set. The subsequent display of the unselected and sorted retrieved records displays the retrieved records in the associated list box such that there is no indication to the user that these records are associated with the user selection because these records are in

fact not associated with the user selection. Hence, the first and second sets of records are displayed in the associated list box, preferably the second set follows the first set. Finally, a select count and a total count can also be displayed. Preferably, the select count and the total count are displayed 520 in a count plate proximate to the list box."

The Examiner states that Marshal col. 9, lines 14-33, as recited above, discloses identifying second data groups, which are included in said first data groups other than said second data sets and the contents of which are not displayed in said display area. The Examiner concludes that since "Marshal discloses sorting the second set of records with a list box, and displaying the list box", then this identifying step of the Claim9 is met. Once again Applicants disagree and believe that the Examiner has misconstrued the above reference. The Examiner mistakenly correlates Marshal's second set of records with Applicants' second data groups. As stated before and according to Marshal's above reference, second set of records are always displayed. However, according to Applicants' invention, second data groups are never displayed.

Marshal col. 9, lines 16-17 recites:

"The retrieved records are then unselected, sorted and displayed 518 in the associated list box."

The Examiner states that Marshal col. 9, lines 16-17, as recited above, discloses presenting second predetermined displays that represent said second data groups in said display area. Once again Applicants disagree and believe that the Examiner has misconstrued the above reference. The

above Marshal reference discloses sorting and displaying of the retrieved records. The above Marshal reference does not disclose presenting or displaying a predetermined display (i.e. an abridged data identifier) to represent data records that are not going to be displayed (i.e. second data groups) (see Application page 5, lines 27-31 for a definition of predetermined displays).

Claims 10 and 11

The Examiner rejects these claims based upon similar rational as Claims 2 and 5 respectively. Similarly, Applicants respectfully refer the Examiner to the explanations provided for Claims 2 and 5 respectively.

Claim 12

Marshal col. 9, lines 35-52 recites:

"Specifically, FIG. 10 illustrates the display results for a specific instance of the previously described example. The main screen 1000 has list boxes 1002, 1004 and 1006 which correspond respectively to the list boxes 116, 132, and 148, of FIG. 1. Here, the user selection occurred in the list box 1002 pertaining to customer information. Namely, the user selected record 1008 containing information about customer "Blandings, Bill" and is so identified by being highlighted. Then, according to the invention, the other list boxes 1004 and 1006 are automatically modified such that they visually indicate those records that are related to the user selection. Here, in the list box 1004 pertaining to product information, the records 1010 and 1012 are related to the user selection (i.e., first set of retrieved records) and are thus sorted (in this example alphabetically) and placed at the top of the list box 1004 before those

records that are not related to the user selection (i.e., second set of retrieved records)."

The Examiner states that Marshal col. 9, lines 35-52, as recited above, discloses first or second predetermined displays that represent said first or second data groups respectively, are presented and a reading pointer for said target data is skipped by the number equivalent to the number of data rows of said first or second data groups. Once again Applicants disagree and believe that the Examiner has misconstrued the above reference. As we have explained before, Marshal does not disclose any predetermined displays representing data that are not displayed (i.e. first or second data groups). Furthermore, the above Marshal reference does not disclose any reading pointer to be skipped by the number of rows that are not displayed. According to Applicants' invention, the term "reading pointer" refers to a pointer (e.g. an SQL cursor) that point to the current row of the target data (see Application page 5, line 31 and page 6, lines 1-2). In order to point to the row of the target data that may be retrieved and displayed next (i.e. start of the next data set), the reading pointer is skipped by the number of rows that are not to be retrieved nor displayed (i.e. data group).

Claim 13

Marshal col. 3, line 60 – col. 4, line 8 recites:

"As a computer readable media containing program instructions for displaying data on a display device of a computer system, with the data being obtained from tables in a database associated with the computer system, and the display device having a plurality of display areas, an embodiment of the invention includes: first computer

readable code devices for determining whether a selection of one or more entries being displayed in a particular one of the display areas has occurred; second computer readable code devices for obtaining a key from the database in accordance with the selection; third computer readable code devices for notifying the other of the display areas of the key; and fourth computer readable code devices for updating the entries in the other of the display areas so as to visually distinguish those of the entries that are associated with the key from those entries that are not associated with the key. ”

The Examiner states that Marshal col. 3, line 60 – col. 4, line 8, as recited above, discloses reading and displaying step is repeated until all said target data are displayed in said display area. The Examiner further states “Marshal discloses readable code for determining a selection, obtaining a key, notifying the other area of the key and updating the entries in the other display area to visually distinguish entries with the key from those not associated with the key”. Once again Applicants disagree and believe that the Examiner has misconstrued the above reference. According to the above Marshal reference, a plurality of related display areas are disclosed to display data entries from different tables of a database. When a selection of data entry is made in one of the display areas, a key representing the selected data is obtained from the database and based on the obtained key the other display areas are updated accordingly. As explained before, Applicants’ invention does not disclose any related display areas (i.e. interlinked) and does not disclose obtaining a key from the database based on a user selection of a data entry in one display area to influence data entries of other display areas.

Claims 14, 15, 16 and 17

The Examiner rejects these claims based upon similar rational as Claims 8, 9, 11 and 12 respectively. The Examiner further states, "Marshal discloses the above implemented in a system, col. 2, lines 49-61". Applicants disagree with the rejection of these claims and respectfully refer the Examiner to the explanations provided for Claims 8, 9, 11 and 12. Applicants agree that similar to Marshal, Applicants' invention can be implemented as a system.

Claims 18 and 19

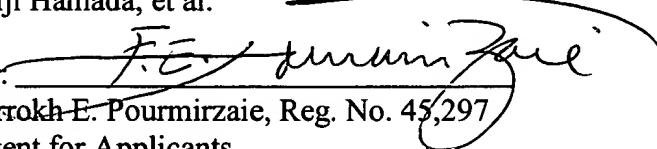
The Examiner rejects these claims based upon similar rational as Claims 8 and 9 respectively. The Examiner further states, "Marshal discloses the above can be implemented as a computer readable medium, col. 2, lines 49-61". Applicants disagree with the rejection of these claims and respectfully refer the Examiner to the explanations provided for Claims 8 and 9. Applicants agree that similar to Marshal, Applicants' invention can be implemented as a computer readable medium.

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Reply to Office Action of 12/10/2003

Conclusion

Applicants therefore respectfully request that the Examiner reconsider all currently outstanding objections and rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this Application, the Examiner is invited to telephone the undersigned at the number provided. Prompt and favorable consideration of this Response is hereby solicited.

Respectfully submitted,
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